

Measuring current transformers of the WS..., WS...-8000 series



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Product description

WS... and WS...-8000 series split-core type measuring current transformers can be opened using the interlock knob to enclose the conductors to be monitored. That allows easy retrofitting in existing installations.

WS... und WS...-8000 series measuring current transformers are highly sensitive measuring current transformers of split-core type which in combination with RCM and RCMS series residual current monitors and evaluators convert AC currents into evaluable measurement signals.

In addition, the measuring current transformers can be used in combination with insulation fault location systems (EDS) for IT systems. They are designed to measure the locating current generated by a PGH locating current injector or an ISOMETER® IRDH. In combination with EDS series insulation fault locators the test current is converted into evaluable signals.

Connection to the respective devices is via a two-wire cable.

Standards

WS... and WS...-8000 measuring current transformers comply with the device standards:

- IEC61869-1.

Device features

WS... measuring current transformers

- For RCMS460/490 residual current monitoring systems
- For RCM420/RCM460 residual current monitors
- For EDS470, EDS460/490 and EDS440 insulation fault locators in AC and DC systems

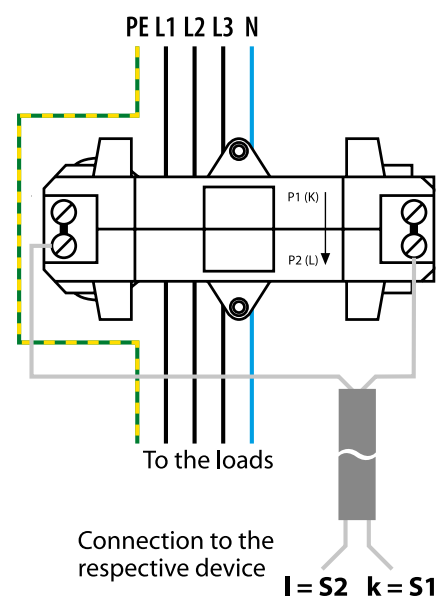
WS...-8000 measuring current transformer

- For EDS473(E)-12, EDS474(E)-12, EDS461 and EDS491 insulation fault locators

Approvals



Wiring diagram



WS... series measuring current transformer

Connection to the respective RCMS series residual current monitoring system, RCM series residual current monitor or to an EDS series insulation fault location systems.

WS...-8000 measuring current transformer

Connection to the respective insulation fault locator EDS473(E)-12, EDS474(E)-12, EDS461 and/or EDS491.



Technical data

Insulation coordination acc. to IEC 60664-1/IEC 60664-3

Rated insulation voltage	800 V
Rated impulse voltage/pollution degree	8 kV/3

CT circuit WS...

Rated primary residual current	10 A
Rated secondary residual current	0.0167 A
Rated transformation ratio K_n	10/0.0167 A
Rated burden	max. 180 Ω
Nominal power	0.05 VA
Frequency range	42 Hz...3 kHz
Rated continuous thermal current I_{cth}	40 A
Rated short-time thermal current I_{tth}	60 x I_{cth} = 2.4 kA/1 s
Rated dynamic current I_{dyn}	2.5 x I_{tth} = 6.0 kA/40 ms

CT circuit WS...-8000

Rated primary residual current	1 A
Rated secondary residual current	0.125 mA
Rated transformation ratio K_n	1 A/0.125 mA
Frequency range	42 Hz...3 kHz
Rated continuous thermal current I_{cth}	6 A
Rated short-time thermal current I_{tth}	60 x I_{cth} = 0.36 kA/1 s
Rated dynamic current I_{dyn}	2.5 x I_{tth} = 0.9 kA/40 ms

Environmental conditions

Operating temperature	-25...+70 °C
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Climatic class acc. to IEC 60721 (except condensation and formation of ice)

Stationary use (IEC 60721-3-3)	3K23
Transport (IEC 60721-3-2)	2K12
Long-time storage (IEC 60721-3-1)	1K22

Classification of mechanical conditions IEC 60721

Stationary use (IEC 60721-3-3)	3M11
Transport (IEC 60721-3-2)	2M4
Long-time storage (IEC 60721-3-1)	1M12

Connection

Connection	screw-type terminals
Connection	
rigid/flexible/conductor sizes	0.08...2.5 mm ² (AWG 28...12)
Stripping length	8...9 mm

Connection EDS, RCM(S) measuring current transformers

Single wire ≥ 0.75 mm ²	0...1 m
Single wire, twisted ≥ 0.75 mm ²	0...10 m
Shielded cable ≥ 0.5 mm ²	0...40 m
Recommended cable (shielded)	J-Y(ST)Y min. 2 x 0.8

Other

Degree of protection, internal components (DIN EN 60529)	IP40
Degree of protection, terminals (DIN EN 60529)	IP20
Screw mounting	M5 with mounting brackets
Approval	UL (under consideration)
Documentation number	D00077

Ordering information

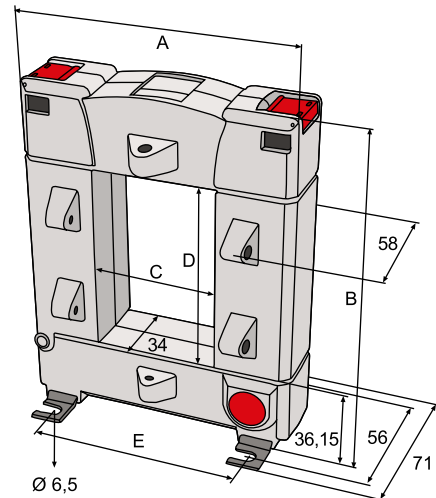
Mounting	Internal dimensions	Type	Art. No.
Mounting brackets	20 x 30 mm	WS20x30	B 9808 0601
		WS20x30-8000 ¹⁾	B 9808 0602
	50 x 80 mm	WS50x80	B 9808 0603
		WS50x80-8000 ¹⁾	B 9808 0604
	80 x 120 mm	WS80x120	B 9808 0606

¹⁾ For EDS461/491 and EDS473/474 insulation fault locators

Selection list

Type	RCM420	RCMS460 RCMS490	EDS460 EDS490	EDS461 EDS491	EDS440
WS20x30	■	■	■	-	■
WS50x80	■	■	■	-	■
WS80x120	■	■	■	-	■
WS20x30-8000	-	-	-	■	-
WS50x80-8000	-	-	-	■	-

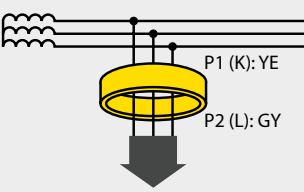
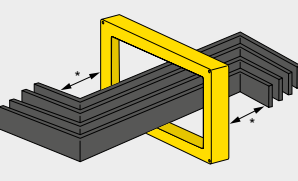
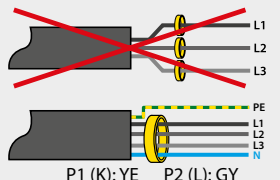
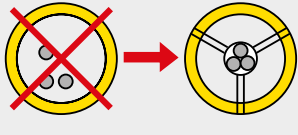
Dimension diagram



Type	Dimensions (mm)					Weight
	A	B	C	D	E	
WS20x30	93	106.15	23	33	64	≤ 0.6 kg
WS50x80	125	158.15	55	85	96	≤ 1.04 kg
WS80x120	155	198.15	85	125	126	≤ 1.4 kg
WS20x30-8000	93	106.15	23	33	64	≤ 0.63 kg
WS50x80-8000	125	158.15	55	85	96	≤ 1.08 kg

Installation instructions

- Do not pass shielded cables through the measuring current transformer.
- As a general principle, the PE conductor and low-resistance conductor loops must not be passed through the measuring current transformer!

<p>It is important that the leads are passed through the measuring current transformer in the right direction</p>		<p>The primary conductors may only be bent from the specified minimum distance. The minimum bending radius specified by the manufacturers must be observed.</p> <p>* Distance to the 90° angle = 2 x transformer height</p>	
<p>Make sure that all current-carrying leads are passed through the measuring current transformer</p> <p>Never pass a PE conductor through the measuring current transformer</p>		<p>The leads must be aligned with the centre of the measuring current transformer</p>	



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